ECT295L
Applied Project Laboratory

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CREDIT HOURS: 1.0

Course Description

Student teams select a predesigned solution from a given list of practical engineering problems, implement the solution, and evaluate performance against expected results. A written report and an oral presentation are required. Prerequisites: ECT-250 and ECT-252 / 0-2-1

Projects are designed to integrate electronics, communications, and interpersonal skills and knowledge. Projects can include telecommunications, controls, or networking applications. Projects may be hardware, software, or a combination of the two. Each student team selects a project from a list of projects made available to the class. Team-proposed projects must be approved by the instructor.

The team develops a project plan for the implementation of the solution and proceeds to fabricate, build, or otherwise carry out the project. The course requirements include submission of a written final report, a formal presentation in class, and a couple of demonstrations in the lab.

Course Performance Measurement Items and Grading

The final grade in the course will be determined using a total point system. Written and oral presentation components are evaluated to determine the total points earned. All members of each team will receive the same letter grade with the exception of "fired" members as described under "Other Responsibilities" on page 2 of this document.

Element	Due Date	Point Value
Project objective and task analysis document	Week 3	50
Progress report #1	Week 4	50
Progress report #2	Week 6	50
Progress report #3	Week 8	50
First draft of final report	Week 10	100
Progress report #4	Week 10	50
Progress report #5	Week 12	50
Final report	Week 14	300
Oral report	Week 14	300
	Total Points	1000

Letter grades are assigned as follows:

Letter Grade	Percentage %	Quality Of Work
A	90 - 100%	Excellent. Quality far exceeding basic requirements.
B	80 - 89 %	Good. Quality exceeds most expectations.
C	70 - 79 %	Average; meets basic expectations.
D	60 - 69 %	Below expectations; needs improvement.
F	< 60 %	Inadequate, failing. Far below minimum standards.

Role of the Instructor

The instructor will act as the Designer during the project, and will have the following responsibilities:

- Choice of viable project technology to achieve system goals.
- Design of electrical, software, and other fundamental portions of the project.
- Definition of teams
- Evaluation of team performance during the project

Role of the Students

Each student will act in the role of technical specialist within a defined team. Team members have the following responsibilities:

- Researching, evaluating, and implementing project elements
- Construction of prototype hardware, software, or other elements
- Production of written documentation
- Presentation of final oral report to a panel of Institute staff members

Team Leaders

Every team will have one leader who will be appointed by the Designer. The leader has the following responsibilities:

- Coordination of day-to-day team work flow
- Handling of ordinary exceptions and problems within the team (Unusual circumstances must be brought to the immediate attention of the Designer.)
- Assisting all members of the team to ensure that project goals are met in a timely manner.
- Submission of all written reports to the Designer.

Other Responsibilities

A team member who consistently fails to share the workload of a team can be removed or "fired" from a team. Only the Designer can fire team members, and this action may only occur under advisement from the team leader. Team members who have been "fired" may be adopted by another team (or reinstated by the same team) at each team's discretion, however, a team member that has been "fired" may not receive a final grade higher than D regardless of the fired member's team final performance. A fired team member who is not reinstated or rehired will receive a grade of F for the course.

Final Report Contents

The final report will follow the standards developed in ENGL-209, Technical Communications, and must include:

- Cover sheet
- Table of contents
- Abstract or executive summary
- Objectives and Deliverables
- Project Schedule with Milestones
- Technical Project Items (hardware schematics, software code listings, bill of materials, theory of operation, troubleshooting and service data)
- What was learned
- Conclusions and recommendations
- Glossary
- References
- Appendices. Brief biographical notes on the team members may be included in an appendix.

Final reports in ECT295L will be kept on file in the campus library. The final reports must be in either Word Perfect or Word format, and will be submitted in both written and electronic forms. The electronic form of all work will be kept on a network share accessible to both the instructor and the team members.
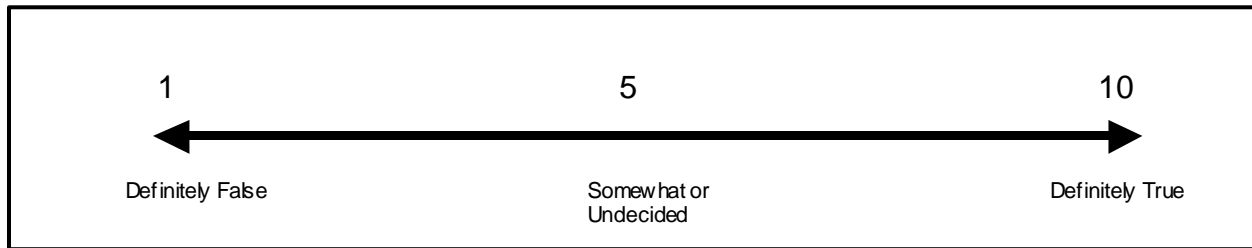
Oral Report Requirements

The oral report will meet the following criteria. The evaluation instrument is shown on the next page. These are the *minimum* requirements:

- The length of the presentation will be between 10 and 15 minutes.
- PowerPoint will be used as the presentation vehicle. Handouts of the slides will be given to audience members.
- The technical detail in the presentation will be that appropriate for an executive summary.
- The team will respond to questions from the panel at the end of the presentation.

Oral Report Evaluation
ECT295 Applied Project Laboratory
Sr. Professor Wheeler

Instructions:

Observe the team's performance during the presentation and evaluate each item below on a scale of 1 to 10. Add up all the individual scores to determine the total score. Use the following evaluation scale:

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1                          5                          10
◄──────────────────────────────────────────────────►
Definitely False      Somewhat or              Definitely True
                      Undecided
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1. The presentation was appropriate in length (should be 10-15 minutes long)   _____

2. The team had a professional appearance (DRESS)   _____

3. The team had a professional demeanor   _____

4. The presentation was organized logically and was easy to follow   _____

5. The presenters made eye contact with the audience members   _____

6. The presenters spoke clearly and were easy to understand   _____

7. The presenters clearly explained the topic and made it interesting   _____

8. The hand-out materials were clearly written   _____

9. The presentation followed the handouts   _____

10. Questions were answered in a direct and honest fashion   _____

Total (100 points possible)   _____

COURSE POLICIES

I. <u>Handing Work in</u>: Work should be given directly to the instructor or his authorized assistant. Under no circumstances should work be turned in to any other persons (including the office) without advance permission from the instructor.

II. <u>Late Work</u>: No late work is accepted for any reason.

III. <u>Plagiarism</u>: *Copying the work of another, and claiming it to be your own is* plagiarism. This includes (but is not limited to) copying others homework, copying from a lab manual or textbook, or collusion. The minimum penalty for cheating in any form is a grade of zero for the element involved; in some cases, failure of the course and/or expulsion from the Institute will also result. All cases of misconduct will be documented and forwarded to Student Services for disciplinary consideration. The DeVry Student Handbook contains complete information on this topic.

Do <u>not</u> turn in any work that is not your own! If in doubt, ask the instructor. Here are some ways to avoid any problems:

- Don't share your computer files (text files, schematics, etc) with anyone else.
- Don't share a diskette (or other media) with another student; it's too easy to get files mixed up.
- Don't copy answers from a neighbor. If you don't understand how to do it, ask!
- Decline any request from fellow students for a copy of your work. Anybody needing this level of help should ask the instructor.

GOOD DATA PROCESSING PROCEDURES

Computers will be used extensively in this course. The following tips will help to minimize the chance of losing a project:

- Make frequent backups. These backups should be in at least two different physical locations.

- Always keep schoolwork on two different diskettes. Both of these disks will contain identical information. If a computer damages one diskette, the data can still be recovered from the other during the lab period.

- Don't save your data to the hard disk on the workstation, except in an emergency. The hard disks on lab workstations are periodically "cleaned" of any extra information as part of a housekeeping program.

- Keep the work for each class on a separate disk.

- Write your name, course, section, and professor's name on each disk. This will make it easier for others to return your work to you should you accidentally leave a disk behind. It happens to all of us!

- If you're using a computer at home, an *anti-virus* program is strongly recommended.

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Progress Report

Date: _____ Week # _____

Project Name: _____

Items that were completed within the time frame of this progress report:

Items that were *not* completed. For any non-completed item, give the reason and corrective action.

Summarize the status of the project in one sentence.

Signatures of team members: